

Docket No.: 408-001

#2
9/2/03
T.M.C.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Enrique Molina)
Serial No.: 09/995,486) Art Unit 3635
Filed: November 28, 2001) Examiner:
For: BUILDING CONSTRUCTION SYSTEM) Steve M. Varner

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The Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-Delivered August 26, 2003

RESPONSE TO RESTRICTION REQUIREMENT AND
INFORMATION DISCLOSURE STATEMENT

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GROUP 3600

Sir:

This is in response to Examiner Varner's telephone restriction requirement of August 25, 2003 between the invention as expressed in Group I consisting of Claims 1-8 directed to a forming assembly for providing a wall mold cavity having freely positioned horizontally disposed reinforcement rods to produce a pour-in-place wall structure; Group II consisting of Claims 9-17 directed to a device for freely positioning horizontally disposed reinforcement rods in a mold cavity; Group III consisting of Claims 18-27 directed to a forming assembly for producing a molded monolithic building structure; Group IV consisting of Claims 28-42 directed to a forming method for providing a wall mold cavity having freely positioned horizontally disposed reinforcement rods to produce a pour-in-place wall structure; and Group V consisting of Claims 43-47 directed to a poured-in-place building construction at a building site.

Applicant Opposes Restriction Requirement of Groups I, II, and IV

Applicant respectfully obviates the requirement for restriction and provisionally elects Claims 1-8 of Group I to be examined on their merits. The claims of Groups I, II, and IV necessarily require the examination of the same classes and subclasses of subject matter to complete a full examination on the merits. The examiner, in order to establish reasons for insisting upon restriction, must show

by appropriate explanation one of the following: (A) A separate classification of each alleged distinct subject of Groups I, II, and IV to show that it has attained recognition in the art as a separate subject for inventive effort, and also a separate field of search. (B) A separate status in the art when they are classifiable together. No evidence exists to show that even though they are classified together, each subject forms a separate subject for inventive effort. For there is no explanation or any evidence presented of such separate status, and also of a separate field of search that indicates a recognition of separate inventive effort by inventors. C) It is necessary to search a different field of search for one of the alleged distinct subjects Groups I, II, and IV in places where no pertinent art to the other subject exists even though the two may be classified together. The indicated different field of search must in fact be pertinent to the type of subject matter covered by the claims.

Where, however, the classification is the same and the field of search is the same and there is no clear indication of separate future classification and field of search, no reasons exist for dividing among related inventions. The inventions must be independent and distinct as claimed for a proper requirement for restriction between patentably distinct inventions. The burden is on the examiner to suggest an example of separate utility for the claims of Groups I, II, and IV. The examiner must provide reasons and/or examples to support conclusions, and that has not been done. Where plural inventions are capable of being viewed as related in two ways, both applicable criteria for distinctness must be demonstrated to support a restriction requirement. The examiner has not made a *prima facie* showing by appropriate explanation of separate classification, or separate status in the art, or a different field of search.

Information Disclosure Statement

Attached are the following U.S. Patents to be entered into the above-identified application in fulfillment of the information disclosure requirement. A completed form PTO/SB/08A (08-03) is also attached.

<i>U.S. Patent No.</i>	<i>Patentee</i>	<i>Issue Date</i>
963,431	I. N. Gates, et al	07-05-10
1,141,057	J. N. Heltzel	05-25-15
1,389,803	F. D. Wolfe	09-06-21
1,453,557	W. F. Wagner	05-01-23

1,692,166	L. O. Gates	11-20-28
1,692,167	L. O. Gates	11-20-28
1,755,960	C. J. Kohler	04-22-30
1,875,136	E. A. Podd	08-30-32
2,413,415	A. Olson	12-31-46
2,504,043	J. Parker	04-11-50
2,516,318	A. H. Hawes	07-25-50
2,815,656	O. F. Klein, et al	12-10-57
3,089,217	D. Flippi	05-14-63
3,238,684	J. P. Wood	03-08-66
3,455,074	E. K. Rice	07-15-69
3,481,575	A. Arrighini	12-02-69
3,524,293	A. Leyten, et al	08-18-70
3,706,168	A. Plish	12-19-72
3,728,836	R. C. Gates	04-24-73
3,734,451	T. W. Tierney	05-22-73
3,961,002	C. E. Brown	06-01-76
4,145,861	R. Yarnick	03-27-79
4,272,050	J. I. del Valle	06-08-81
4,426,061	J. R. Taggart	01-17-84
4,501,098	J. H. Gregory	02-26-85
4,864,792	D. André, et al	09-12-89
4,972,646	B. J. Miller, et al	11-27-90
5,771,648	B. J. Miller, et al	06-30-98
5,218,809	H. U. Baumann	06-15-93
5,535,565	A. B. Majnaric, et al	07-16-96
5,547,163	C. A. Lack	08-20-96
5,570,552	A. T. Nehring	11-05-96
6,070,380	S. Meilleur	06-06-00

Prior Art Distinguished

U.S. Patent 3,089,217 discloses the common poured-in-place practice of erecting a form system having parallel spaced panels interconnected by a tie system which traverses the space between the panels to form concrete walls wherein the central members of the tie system remain embedded in the concrete. The primary advantage of such an arrangement is that the forces resulting from the deposition of the initially plastic concrete are balanced out between the opposite form panels, and thus require a minimum of bracing from the outside. Such bracing is limited to maintaining the vertical orientation of the assembled form system. A core box and special ceiling forms are required to complete the disclosed construction procedure.

U.S. Patent 2,516,318 is directed to a removable wall panel support structure for forming a wall in successive courses.

U.S. Patent 5,218,809 discloses an earthquake resistant poured-in-place concrete structure having horizontal and vertical reinforcing bars. The '809 reinforcement assembly requires the welding of horizontal hanger cross members from which a pair of welded reinforcement grids are freely placed. The horizontal and vertical reinforcing bars are not free of each other and a stress point exists in each of the welded joint sites. There is no disclosure of a reinforcement rod suspending device that is attached to one mold cavity panel and in which reinforcing rods may be freely positioned at preselected horizontal and vertical locations within the mold cavity before the second opposing mold cavity panel is vertically disposed to provide the desired mold cavity.

U.S. Patent 4,864,792 relates to prefabricated modules used in the building industry that comprise an array of flat elements made from light material, and a plurality of nettings made from welded steel wires, which extend along a lengthwise direction of the module and which are welded to a series of cross-wise wires. The nettings comprise lengthwise wires and spacing or brace wires that define sections in which the flat elements are arranged and form two panels used as lost shuttering for casting reinforced concrete. The resistance of the concrete to tensile and shear stresses is insured by a reinforcement from steel wire embedded in the cast concrete.

U.S. Patents 1,389,803 and 4,426,061 disclose a poured-in-place concrete construction system having a reinforcement mesh disposed between opposed wall panels that are juxtaposed opposing lateral sides of a poured foundation and tied to be vertically disposed in placed.

U.S. Patents 3,238,684 and 3,524,293 show poured-in-place wall forming systems having horizontal and vertical reinforcing rods disposed within a mold cavity formed with permanent wall panels. The '684 rods are held in place using a plurality of ties that have to be individually manipulated for the horizontal and vertical placement of the various rods used in the system. The '293 patent shows the horizontal and vertical reinforcing rods welded together unlike the freely positioned horizontally disposed reinforcement rods of the present invention.

U.S. Patent 2,504,043 discloses a building form used to construct walls in courses so that reinforcing rods are laid parallel to each other in each successive coarse. The '043 process is thus extremely slow in producing a building wall.

U.S. Patent 5,570,552 is directed to a modular wall forming system having a box-like block form of expanded foam plastic material with opposite, parallel, spaced apart sidewalls and end walls extending between upper and lower surfaces and defining an internal cavity for receiving concrete slurry. A plurality of transverse bridge members maintain spacing between the sidewalls at spaced locations along the length thereof. Each bridge member includes a central web extending between opposed tongues which are slidably received in T-grooves formed in the sidewalls, and has a structural configuration for slidably receiving a vertical reinforcement bar a plurality of horizontal reinforcement bars. The mold cavity sidewalls slidably receive the bridge members in a first direction while preventing substantial movement therebetween. Each of the sidewall sections and bridge members have to be handled and individually placed to form the building wall mold cavity.

U.S. Patents 963,431 and 2,413,415 show the well known use of tie members for holding vertically and horizontally disposed wall panels in opposed facing position to receive concrete in forming a poured-in-place wall construction.

U.S. Patent 3,728,836 shows a concrete form tie and rebar chair for fixing the position of a vertically disposed reinforcing rod at a location laterally spaced inwardly from the interior surfaces of the opposed wall panels. The form tie includes spreaders that fix the distance between the spaced opposed panels.

U.S. Patents 1,692,166; 1,692,167; 1,755,960; 1,875,136; 3,481,575; and 5,547,163 each show variations of form ties that address fixing the spaced distance between opposing walls in a poured concrete forming structure.

U.S. Patents 1,141,057 and 2,815,656 respectively disclose the formation of an upstanding curb portion on a molded concrete road slab and a foundation having an upstanding wall portion on which a wall of corrugated panels are vertically disposed.

U.S. Patent 3,734,451 discloses a concrete wall form having a plurality of interconnected, unitary metal panels comprised of one or more extruded, channel-shaped intermediate sections and an extruded, channel-shaped end section at either end of the intermediate section.

U.S. Patent 1,453,557; 5,535,565; and 6,070,380 each discloses an assembly having a unique system for attaching spaced horizontal and vertical reinforcing bars in a concrete forming structure in which the grid assembly between the interior surfaces of the panels holds opposed wall panels in place when hardenable material is poured in the mold cavity.

U.S. Patents 4,972,646 and 5,771,648 each discloses a concrete forming system including a pair of foam panels having laterally aligned holes arranged in a rectangular grid. Cross wires or rods extend through the holes. Longitudinally extending wires or rods are located against the interior surfaces of the walls and are welded to the cross rods. Retaining means on the ends of the cross rods are disposed against the exterior surfaces of the walls to provide a sandwich construction firmly to interconnect the walls and the rods thereby forming a poured-in-place mold cavity.

The prior art makes numerous attempts to facilitate production of pre-cast reinforced concrete structures. Pre-cast concrete fabrication is directed to the formation of modular units such as building panels and room modules that are subsequently moved to the construction site and disposed into a designed structural position. This technique requires heavy lifting and moving equipment that must work on accessible terrain for accomplishing the desired building construction.

U.S. Patent 4,272,050 discloses a method and apparatus for pre-casting box-like reinforced concrete room modules on an assembly line basis. Each completed module is then moved to a remote construction site and juxtaposed other modules to form a completed building. Apparatus includes a pair of movable interior forms for defining the interior surfaces of side walls and ceilings whereby one interior mold at a time can be removed when concrete is in semi-cured condition. The method includes casting a floor slab with short upstanding side wall portions to serve as guides for moving interior forms in place onto floor slab. The method also includes use of integral multiples of four serially arranged casting beds on which various procedures for forming the room modules proceed simultaneously and progressively.

Each of the pre-cast building construction systems of U.S. Patents 3,455,074; 3,706,168; 3,961,002; 4,145,861; and 4,501,098 is associated with a particular floor plan. The '074 patent first forms reinforced modules having walls and ceiling, placing them at a building site, and then pouring

floor slabs after the wall and ceiling modules are in place. The '168 prefabricated reinforced concrete building is formed of pre-cast separate footings that are spaced in an arrangement defining the floor plan of the building. Pre-cast wall-forming panels, disposed in edge-abutting relation, are supported by the footings. Roof-forming panels overlie the upper edges of the wall-forming panels. The '002 method and apparatus forms an integral building construction unit of synthetic material such as polyurethane foam that is transported to the building site after its construction. The '861 method includes placing pre-cast wall modules in trenches having the general outline of the building floor plan and subsequently pouring the floor slab and interconnecting the roof or ceiling structure. The '098 construction method forms modular structures at a remote location and later places them on a foundation laid out according to a building floor plan.

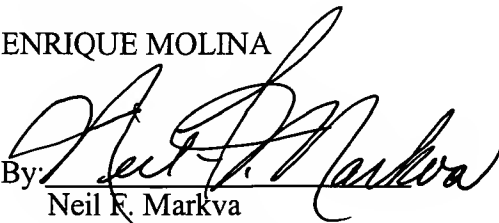
Each of the foregoing prior art systems are generally time-consuming with respect to preparation of the forming assemblies either at or remote from the building site; expensive moving and transporting equipment is needed to handle the forming equipment and/or completed modular constructions being moved to the building site; and skilled craftsmen are required to use sophisticated molding equipment to prepare for and effect the placement of hardenable material into the particular mold cavity.

Conclusion

In view of the foregoing, examination of the claims of Groups I, II, and IV is respectfully requested.

Respectfully submitted,

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